



ENVIRONMENTAL
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State Wetland Protection

Status, Trends, & Model Approaches

*A 50-state study by the
Environmental Law Institute*

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U.S. Environmental Protection Agency*

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Appendix: State Profiles

Indiana

I. Overview

Indiana ranks fourth highest among the 50 states with respect to the proportion of wetland acreage lost.¹ An estimated 85 percent of Indiana's original wetlands have been lost to drainage projects; approximately 813,000 acres of wetlands remain, comprising 3.5 percent² of the state's total land area. Of these remaining wetlands, approximately one-third are considered to be so-called "isolated" wetlands.³ Indiana's Department of Environmental Management (IDEM) administers the §401 Water Quality Certification program under the Clean Water Act (CWA) in addition to a state-level regulatory program that targets isolated wetlands. The Department of Natural Resources (IDNR) regulates wetlands situated within floodways and the high-water line of lakes.

II. Regulatory Programs

Wetland definitions and delineation

In Indiana, "waters" are defined as "the accumulations of water, surface and underground, natural and artificial, public and private, [or] a part of the accumulations of water; that are wholly or partially within, flow through, or border upon Indiana." The term also includes all "waters of the United States," as defined in the Clean Water Act. The term does not include: (1) an exempt isolated wetland; (2) a private pond; or (3) an off-stream pond, reservoir, wetland, or other facility built for reduction or control of pollution or cooling of water before discharge.⁴

The state defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include: (1) swamps; (2) marshes; (3) bogs; and (4) similar areas."⁵ A "state regulated wetland" is defined as "an isolated wetland located in Indiana that is not an exempt isolated wetland."⁶

Wetland delineation criteria correspond to the criteria within the U.S. Army Corps of Engineers' 1987 *Wetlands Delineation Manual*.⁷

Wetland-related laws and regulations

¹ Indiana Department of Natural Resources. *Indiana Wetlands Conservation Plan* (1996), at <http://www.in.gov/dnr/fishwild/publications/inwetcon/wetconpl.htm> (last visited July 5, 2007).

² Percentage calculated using information from the following resources. Indiana Department of Administration, *State Land Office: Facts at a Glance*, at <http://www.in.gov/idoa/landoff/glance.html> (last visited July 5, 2007); *Id.*

³ Quinn, Bowden. *Indiana's New Wetland Legislation: Threat to Isolated Wetland* . . . 26:3. NATIONAL WETLANDS NEWSLETTER , 22, 22-25 (2004), .

⁴ IND. CODE § 13-2-265 *et. seq.*

⁵ IND. CODE § 13-11-2-265.7.

⁶ "'Isolated wetland' means a wetland that is not subject to regulation under Section 404(a) of the Clean Water Act." 327 IND. ADMIN. CODE -17-1-3; IND. CODE § 13-11-2-221.5.

⁷ IND. CODE § 13-11-2-265.8.

IDEM regulates “waters of the state,” including administration of the §401 Water Quality Certification Program. The IDEM also administers a permitting program⁸ for wetland activities in state regulated wetlands (including many isolated wetlands) in order to “promote a net gain in high quality isolated wetlands; and [. . .] assure that compensatory mitigation will offset the loss of isolated wetlands allowed by the permitting program.”⁹

IDNR regulates construction activities within, over, and/or under the state’s waterways. Agency jurisdiction falls under the Lake Preservation Act (LPA)¹⁰ and the Flood Control Act (FCA).¹¹

Although state legislation administered by the Department of Natural Resources does not typically address wetlands or habitat by this terminology, the broad language contained within several programs expresses a clear legislative mandate that environmental and resource functions and benefits be considered in the regulatory process.[. . .] For example, the [FCA] [. . .] precludes the issuance of a license which will have ‘unreasonably detrimental affects upon fish, wildlife, or botanical resources’. The [LPA] [. . .] protects against activities which would threaten the ‘natural resources and natural scenic beauty’ of Indiana’s public freshwater lakes. At the heart of these environmental and resource values are wetlands.”¹²

Under the LPA, the IDNR regulates public freshwater lakes, including wetlands within the lake’s legal and average “shoreline” or “water line.”¹³ Under the FCA, IDNR regulates activities conducted in “the area within the floodway produced by the regulatory flood.”¹⁴ The area within the floodway often encompasses wetlands and streams.¹⁵

Organization of state agencies

IDEM has six full-time equivalents, who are tasked with enforcement, permitting, monitoring, §401 certification, and outreach activities.¹⁶ Funding for IDEM’s wetland activities, approximately \$500,000 per year, is derived primarily from federal CWA §106 grants.¹⁷

IDNR does not operate a program dedicated solely to wetlands; however, three divisions conduct wetland-related activities: Division of Fish and Wildlife, Division of Water, and Division of Nature Preserves. Operating out of one central office, employees from all three divisions review

⁸ IND. CODE § 13-18-22; 327 IND. ADMIN. CODE 17-1-1.

⁹ IND. CODE § 13-18-22-1.

¹⁰ IND. CODE § 14-26-2.

¹¹ IND. CODE § 14-28-1.

¹² Natural Resources Commission Information Bulletin #17, *Wetlands and Habitat Mitigation* (1997), at <http://www.in.gov/legislative/register/20061213-IR-312060562NRA.xml.pdf> (last visited July 5, 2007).

¹³ Personal communication with James Ray, Ind. Dep’t of Natural Res., Lake & River Enhancement Section (Feb. 28, 2007).

¹⁴ “‘Regulatory flood’ means ‘a flood having a one percent (1%) probability of being equaled or exceeded in a year as calculated by a method and procedure that is approved by the Natural Resources Commission. The regulatory flood is equivalent to the base flood or the 100-year frequency flood.’ ‘Floodway’ means ‘the channel of a river or stream and those portions of the flood plains adjoining the channel which are reasonably required to efficiently carry and discharge the peak flow of the regulatory flood of any river or stream.’” IND. DEP’T OF ENVTL. MGMT., OFFICE OF WATER QUALITY. WATERWAY PERMITTING HANDBOOK (2002), *available at* <http://www.in.gov/wetlands/publications/cleanwater.pdf> (last visited July 5, 2007).

¹⁵ Ray, *supra* note 13.

¹⁶ Personal communication with Marylou Renshaw, Watershed Planning Branch in the Office of Water Quality, Ind. Dep’t of Env’tl. Mgmt., (Feb. 23, 2007).

¹⁷ Personal communication with James Robb, Wetlands & Storm Water Section, Ind. Dep’t of Env’tl. Mgmt. (Feb. 25, 2007).

permit applications under the CPA and FCA. Staff activities are funded by the state's general appropriations fund. Because activities vary widely and are not always wetland-specific, estimating an annual budget is difficult.¹⁸

§401 certification

A §401 certification from IDEM must be obtained for any activity requiring a federal permit. The state issues an estimated 750 certifications per year (including general permits). Most applications are approved, often with conditions;¹⁹ less than one percent are waived, and one to two percent are denied.²⁰

Before issuing a certification, IDEM will review the proposed activity and use qualitative assessments and best professional judgment to determine whether or not it conforms to Indiana law, including state water quality standards. IDEM denies water quality certification if the application is deficient, if the impacts can be avoided or minimized, or if the proposed compensatory mitigation is determined to be insufficient to offset the effects of the activity.²¹ All applications for certification are subject to public comment.²²

Nationwide permits

Indiana has denied²³ and conditioned²⁴ a number of the NWP's issued in 2002. In addition, the Corps and IDEM have developed a Regional General Permit (RGP) to replace 16 of the NWP's²⁵ for projects determined to pose minimal impact.²⁶ Generally, the Corps uses RGPs to authorize

¹⁸ Ray, *supra* note 13.

¹⁹ "Typical conditions include minimization of impacts, compensatory mitigation for wetland impacts, establishment of buffer zones around waterbodies, prohibitions on work during certain time periods, stormwater and erosion control measures, conservation easement, and additional monitoring or water quality studies." Indiana Department of Environmental Management, *Section 401 Certification Program Overview*, at <http://www.in.gov/idem/programs/water/401/overview.html> (last visited July 5, 2007).

²⁰ Robb, *supra* note 17.

²¹ See Indiana Department of Environmental Management, Nonrule Policy Document, *Water-011-NPD - Reasons for Denial*, at <http://www.in.gov/idem/rules/policies/water/011.pdf> (last visited July 5, 2007); Robb, *supra* note 17.

²² Indiana Department of Environmental Management, *supra* note 19.

²³ The following NWP's have been denied: NWP#17-Hydropower Projects; NWP#20-Oil Spill Cleanup; NWP#23-Approved Categorical Exclusions; NWP#31-Maintenance of Existing Flood Control Facilities; NWP#32-Completed Enforcement Actions; NWP#34-Cranberry Production Activities; NWP#35-Maintenance Dredging of Existing Basins; NWP#38-Cleanup of Hazardous and Toxic Waste. Letter from Martha Clark Mettler, Chief, Watershed Branch, Office of Water Quality, to James Townsend, US Army Corps of Eng'rs (July 6, 2004, *available at* <http://www.in.gov/idem/programs/water/401/idem401nwp02.pdf> (last visited July 5, 2007)).

²⁴ The following NWP's have been conditioned: NWP#3-Maintenance; NWP #12-Utility Line Activities; NWP #16-Returned Water from Upland Disposal Areas; NWP#27-Stream and Wetland Restoration Activities; NWP#37-Emergency Watershed Protection and Rehabilitation. *Id.*

²⁵ NWP #7-Outfall Structures; NWP #11-Temporary Recreational Structures; NWP #13-Bank Stabilization; NWP #14-Linear Transportation Projects; NWP #15-U.S. Coast Guard Approved Bridges; NWP #18-Minor Discharges; NWP #19-Minor Dredging; NWP #25-Structural Discharges; NWP #29-Single-family Housing; NWP #36-Boat Ramps; NWP #39-Residential, Comm. and Institutional Dev.; NWP #40-Agricultural Activities; NWP #4-Reshaping Existing Drainage Ditches; NWP #42-Recreational Facilities; NWP #43-Stormwater Management Facilities; NWP#44-Mining Activities. *Id.*

²⁶ "The following activities can be authorized by the RGP:

1. New Construction Activities, including filling and grading, dredging, channelization, road crossings, culverts, bank stabilization.
2. Agricultural Activities, including clearing, tiling, ditching, fills for buildings or access roads.

projects that affect less than one acre of “waters of the United States,” provided the project complies with the terms and general conditions outline in the RGP.²⁷ Several specific conditions also apply to the RGP.²⁸ Indiana’s action on the 2007 NWP’s could not be reviewed within the reporting period.

Mitigation

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3. Mining Activities, including staging, access, extraction, berms, temporary storage. Excludes surface coal mining.

The following Maximum Limitations are placed on the RGP by the US ACOE:

1. Discharges of dredged or fill material are limited to one (1) acre or less of "waters of the United States," including wetlands;
2. Dredging in "navigable waters" is limited to 10,000 cubic yards;
3. Structures and fills for docking and mooring are limited to similar permitted structures and fills in the vicinity;
4. Discharges of dredged or fill material into Lake Michigan are limited to one tenth (0.1) acre, except for bank stabilization;
5. Impacts resulting from filling greater than one tenth (0.1) acre of special aquatic sites, or work causing more than minimal effects will require mitigation to compensate for impacts to the stream, special aquatic sites or wetlands affected. Other work or structures in navigable waters will be evaluated and must include mitigation to reduce impacts to minimum levels.

Proposed projects that fall under one of the three classes of activities listed above, and will result in impacts less than the Maximum Limitations listed above, are eligible for authorization under the RGP. All proposed projects are subject to the Corps' restrictions and the RGP General Conditions detailed in the Public Notice issued February 11, 2000.” IDEM, *Regional General Permit*, at <http://www.in.gov/idem/programs/water/401/rgp02.html> (last visited July 5, 2007).

²⁷ The following conditions apply to all activities that qualify under the Regional General Permit or any Nationwide Permit approved under 401 certification in Indiana: “1.The person shall deposit any dredged material in a contained upland disposal area to prevent sediment run-off to any waterbody. The person shall dispose of all dredged and excavated material according to the requirements of 329 IAC 10, governing Solid Waste Land Disposal Facilities. The person's project information may be forwarded to the IDEM Office of Land Quality, Industrial Waste Section for review. Sampling may be required to determine if the dredged sediment is contaminated. Failure to properly dispose of contaminated sediment may result in enforcement action. 2.The person shall install erosion control methods prior to any soil disturbance to prevent soil from leaving the construction site. Appropriate erosion control methods include, but are not limited to, straw bale barriers, silt fencing, erosion control blankets, phased construction sequencing, and earthen berms. The person shall monitor and maintain erosion control structures and devices regularly, especially after rain events, until all soils disturbed by construction activities have been permanently stabilized. 3.The person shall clearly mark the construction limits shown in the attached plans at the project site during construction. 4.The permittee shall allow the commissioner or an authorized representative of the commissioner (including an authorized contractor), upon the presentation of credentials: (a) to enter upon the permittee's property; (b) to have access to and copy at reasonable times any records that must be kept under the conditions of this certification; (c) to inspect, at reasonable times, any monitoring or operational equipment or method; collection, treatment, pollution management or discharge facility or device; practices required by this certification; and any wetland mitigation site; and (d) sample or monitor any discharge of pollutants or any mitigation site. 5.This granting of Section 401 Water Quality Certification does not relieve the recipient of the certification from the responsibility of obtaining any other permits or authorizations that may be required for this project or related activities from IDEM or any other agency or person. 6. This certification does not: (a) authorize impacts or activities outside the scope of this certification; (b) authorize any injury to persons or private property or invasion of other private rights, or any infringement of federal, state or local laws or regulations; (c) convey any property rights of any sort, or any exclusive privileges; (d) preempt any duty to obtain federal, state or local permits or authorizations required by law for the execution of the project or related activities; or (e) authorize changes in the plan design detailed in the application.” *Id.*

²⁸ These conditions also apply to NWP #3,12,27 and 37. *Id.*

One goal of the isolated wetland permit program administered by IDEM is to ensure that “compensatory mitigation will offset the loss of isolated wetlands allowed by the permitting program.”²⁹ Indiana Code outlines required standards and ratios for compensatory mitigation.³⁰ Further guidance is provided by two “non-rule” policy documents published by the IDEM that provide information on determining when compensatory mitigation is complete and meets success criteria.³¹ IDEM also has conducted an informal study of wetland mitigation success to determine whether mitigated wetlands were being constructed according to guidelines and were functioning properly.³²

Compensatory mitigation also is required for wetland and stream impacts associated with permitted activities under the LPA and the FCA.³³ To provide guidance for the IDNR’s compensatory mitigation activities, the state’s Natural Resource Commission published *Information Bulletin #1*, a non-rule document establishing “a general framework for the assessment and determination of wetlands or habitat compensatory mitigation where a construction project is likely to reduce or degrade an existing wetland or habitat.”³⁴ In addition, the IDNR began drafting mitigation guidelines in 2006. Agency staff intend to make the guidelines an enforceable “rule document” upon completion.³⁵

Under the *Interagency Coordination Agreement on Wetland Mitigation Banking within the State of Indiana*,³⁶ the Louisville and Detroit Districts of the Corps, USDA Natural Resources Conservation Service (NRCS), EPA, U.S. Fish and Wildlife Service (FWS), IDEM, and IDNR participate on a mitigation banking review team. So far, the state has authorized one wetland mitigation bank under this agreement in northwest Indiana, called the Lake Station Wetland Mitigation Bank.³⁷

Compliance and enforcement

Wetland enforcement cases are typically resolved through administrative action, which may include: an agreed order that sets forth compliance terms and a civil penalty to which both IDEM and the violator agree;³⁸ or a unilateral order issued by IDEM containing compliance terms and a civil penalty that is subject to appeal by the violator.³⁹ In 2006, one Commissioner’s Order and one civil penalty were issued. No criminal penalties were issued.⁴⁰

²⁹ IND. CODE §13-18-22-1.

³⁰ IND. CODE §13-18-22-6.

³¹ Indiana Department of Environmental Management, *Determining when Compensatory Mitigation is Complete*, Water-009-NPD (September 8, 2006), at <http://www.in.gov/idem/rules/policies/water/009.pdf> (last visited July 5, 2007).

³² Personal communication with Dennis Clark, Chief, Assessment Branch, Ind. Dep’t of Env’tl. Mgmt. (March 9, 2006).

³³ Ray, *supra* note 13.

³⁴ *Id.*

³⁵ Personal communication with Jon Eggen, Ind. Dep’t of Natural Res. (March 8, 2007).

³⁶ Interagency Coordination Agreement on Wetland Mitigation Banking in the state of Indiana, at <http://www.in.gov/idem/programs/water/401/indica1002.pdf> (last visited July 5, 2007).

³⁷ Renshaw, *supra* note 16.

³⁸ IND. CODE § 13-30-3-4, 13-30-3-10 to 13-30-3-12.

³⁹ The Statutory range of penalty amounts is zero to \$25,000 per day per violation. IND. CODE § 13-30-4-1.

⁴⁰ IND. CODE § 13-30-6-1.

Tracking systems

The IDEM does not have a formal system for tracking permits or mitigation. The agency uses spreadsheets to track compliance with review deadlines and is currently working on both a spreadsheet to track mitigation monitoring timelines and a database to track all aspects of the regulatory process.⁴¹

IDNR operates a comprehensive database called *Unity* to track all activities and documents relating to the permitting process, including inspection reports, images from site inspections, and electronic versions of issued permits. Mitigation requirements and review documents from periodic follow-up site inspections also are recorded in the *Unity* database, and IDNR is working to improve mitigation tracking.⁴²

III. Water Quality Standards

Indiana's water quality standards do not identify criteria, designated uses, or anti-degradation standards specific to wetlands. As such, designated uses for wetlands default to the open water designated uses.⁴³ Wetland functions that the state water quality standards and open water designated uses relate to include: sediment trapping, fish and wildlife habitat, water quality/pollution control, and minimum stream flows.⁴⁴

IV. Monitoring and Assessment

IDNR

Indiana has not adopted a wetland-specific monitoring or assessment program. However, the IDNR monitors wetland habitat as an auxiliary component to their fish and wildlife habitat monitoring program. These activities are funded by the federal Fish and Wildlife Act. Although IDNR's regulatory program does not require wetland assessment or monitoring, the agency plans to increase monitoring and assessment in order to determine habitat quality for wetlands. IDNR monitors all wetland mitigation projects for three years. IDNR does not prescribe the use of a formal assessment methodology, but in the past, the agency has employed the Chicago District's assessment methodology. In general, IDNR tracks biological criteria using a functional assessment methodology to determine whether the mitigation sites achieve performance criteria, which are defined on a project-by-project basis. Typically, however, the success of wetland habitat mitigation is measured and reported in terms of the percentage of surviving plantings and the hydrology of the site. Last year, the IDNR authorized the use of a floristic quality assessment for wetlands.⁴⁵

The IDNR's Division of Fish and Wildlife sponsors "Hoosier Riverwatch," a stream and river quality monitoring initiative started in 1994 to increase public awareness of water quality issues

⁴¹ Renshaw, *supra* note 16.

⁴² Eggen, *supra* note 35.

⁴³ 327 IND. ADMIN. CODE 2-1-1.

⁴⁴ 327 IND. ADMIN. CODE 2-1-3, 2-1-6.

⁴⁵ Eggen, *supra* note 35.

and concerns by training volunteers to monitor stream water quality. Approximately 300-400 groups are actively monitoring around the state. Funding for this program is provided, in part, by the federal Sport Fish Restoration Fund.⁴⁶

IDEM

In response to an EPA request, the IDEM has recently revised their monitoring strategy to include a wetland assessment program that incorporates the following components: (1) inventory of the state's wetlands using one-meter resolution aerial photography; (2) ground-truthing of the photographic inventory using a rapid bioassessment methodology; and (3) detailed, comprehensive assessments in a small sample of identified wetlands to determine quality, type, and composition. IDEM plans to use this wetland monitoring strategy for regulatory enforcement; however, none of the proposed activities have been implemented due to a lack of funding. At the moment, the agency is conducting broad site assessments using best professional judgment to support their certification and/or permit decisions.

IDEM also supports a formal stream monitoring and assessment program, which is integrated with the agency's surface water quality monitoring program. The IDEM utilizes a probabilistic monitoring strategy, developed cooperatively with the EPA, to track chemical and biological criteria for the development of the CWA 303(d) list and 305(b) report. The data are also used for enforcement purposes.⁴⁷

V. Restoration and Partnerships

Both IDNR and IDEM administer state and federal restoration programs that include a wetland component. These include incentive programs that build partnerships between public agencies and private land owners. Within IDNR, the Division of Fish and Wildlife acquires and manages Wetland Conservation Areas for fishing and hunting and, through the Lake and River Enhancement Program, provides funding and technical assistance to lake associations and landowners for construction and maintenance of wetlands that treat nonpoint source pollution. The Division of Forestry provides technical assistance and administers incentive programs for the stewardship of forested wetlands (the major wetland type in Indiana) and management of wetlands in state forests. The Division of Reclamation advises landowners in development of wetlands for wildlife habitat over reclaimed mine lands. The Division of State Parks and Reservoirs restores, enhances and creates wetlands for the purposes of watershed protection, recreational activities such as hunting and fishing, habitat enhancement, and ecosystem restoration. Finally, the Division of Nature Preserves manages natural areas that contain rare wetland types and species, and, through the Lake Michigan Coastal Program, preserves and restores high quality wetland areas in the Lake Michigan basin. The program also provides funding and technical assistance.⁴⁸

⁴⁶ See Indiana Department of Natural Resources, *Hoosier Riverwatch*, at <http://www.in.gov/dnr/riverwatch/> (last visited July 5, 2007).

⁴⁷ Clark, *supra* note 32.

⁴⁸ Natural Resources Commission, Information Bulletin #27 (Second Amendment), *Wetland Conservation Guidelines* at <http://www.in.gov/legislative/register/20061213-IR-312060565NRA.xml.pdf> (last visited July 5, 2007).

The *Hoosier Wetlands Conservation Initiative*, the “action” component of the Indiana Wetland Conservation Plan, presents a strategic approach to conserving Indiana’s wetland resources, including “positive incentives that motivate people to voluntarily conserve and restore wetlands are emphasized.”⁴⁹ Table 1 outlines state-level incentive programs with wetland restoration components that encourage partnerships between public agencies and private landowners.

Table 1. State wetland incentive programs.⁵⁰

Program Name	Purpose	Funding Source	Target Lands/Owners
Appalachian Clean Streams Initiative	To improve water quality in streams adversely impacted by acidic drainage from abandoned coal mines.	US Department of the Interior, INDR Division of Reclamation, Landowner contributions (in-kind or direct)	All landowners of southwestern Indiana
Classified Wildlife Habitat Act	To reduce habitat loss of private land	Dedicated Fish and Wildlife Fund	Landowners of grasslands, shrublands, wetlands, woodlands less than 10 acres, and riparian areas.
Indiana Classified Forest Program	To encourage the retention of forest land in Indiana for the benefits of timber production, watershed protection	State funded	Native and/or planted forest lands at least 10 acres in size
LARE	To control sediments and nutrient inflows into public access lakes or rivers	Boat fee, cigarette tax, landowner contributions (cost-share)	Watersheds of public-access lakes and rivers

Finally, since 1994 Indiana has been administering the federal Wetlands Reserve Program (WRP).⁵¹ Other federal incentive programs with either direct or indirect wetland restoration components being administered by both federal and state agencies in Indiana include: Conservation Reserve Program, Emergency Watershed Program-Floodplain Easement Program, Environmental Quality Incentives Program, Farmable Wetlands Project, Partners for Fish and Wildlife, Forest Land Enhancement Program, Forestry Incentives Program, Watershed Protection and Flood Prevention Program, Forest Stewardship Program, and CWA Section 319 Nonpoint Source Management Programs.⁵² With the exception of the 319 program, state agencies do not participate significantly in the administration of most federal programs.⁵³

VI. Education and Outreach

The IDEM developed a formal outreach and education plan in 1997 with funding from an EPA wetland program development grant. Seeking to raise awareness on regulatory issues, the need for wetland protection, and the value of wetlands, the IDEM used this grant to develop and

⁴⁹ Indiana Department of Natural Resources, *supra* note 1.

⁵⁰ Phil McLoud, *A Summary of Wetland Incentive Programs in Indiana*, available at <http://www.in.gov/wetlands/publications/summary.pdf> (last visited July 5, 2007).

⁵¹ United States Department of Agriculture, Natural Resource Conservation Service. *Indiana Wetlands Reserve Program*, at <http://www.nrcs.usda.gov/PROGRAMS/wrp/states/in.html> (last visited July 5, 2007).

⁵² McLoud, *supra* note 61.

⁵³ Ray, *supra* note 13.

distribute videos, a series of brochures, and presentations throughout the state to regulated communities. IDEM's outreach strategy targets state agencies (e.g., IDNR, Soil and Water Conservation Districts, Indiana Department of Transportation), developers, landowners, citizens, universities, and associations.⁵⁴

IDNR conducts various activities seeking to help educators integrate wetland education into their curriculum, including Project Learning Tree, Project WILD, GoFishIN, and Project WET.⁵⁵ In addition, the Division of Nature Preserves conducts education related to their restoration activities.⁵⁶

VII. Coordination with State and Federal Agencies

IDEM, IDNR and FWS have a memorandum of understanding (MOU) regarding their mutual review of 401 certification applications.⁵⁷ IDEM also has an MOU with the NRCS relating to mitigation activities, specifically, the methodology used to assess wetlands and determine the acreage of mitigation required. There also is informal coordination among EPA, Corps, FWS, IDNR, and IDEM on regulatory and jurisdictional issues.⁵⁸

In 1994, the IDNR initiated the development of the Indiana Wetlands Conservation Plan (IWCP). Three groups participated in the development of the plan: (1) Wetlands Advisory Group, which represented diverse stakeholders in Indiana wetlands conservation—from environmentalists to county surveyors and farmers to coal mine operators; (2) Technical Advisory Team, comprising technical representatives from the state and federal agencies that have regulatory or oversight roles in wetlands conservation; and (3) Project Reviewers, comprising several hundred stakeholders that were solicited for input on the IWCP by telephone and through the mail throughout the planning process. More than 900 individuals across Indiana participated in the Plan's development.⁵⁹

On April 23, 1996, the Natural Resources Commission adopted the "Resolution for the Adoption of the Indiana Wetlands Conservation Plan," requiring the IDNR to "pursue full implementation of the Indiana Wetlands Conservation Plan."⁶⁰ In April 1997, the U.S. EPA provided the IDNR with a two-year grant to fund implementation of several specific actions identified in the plan. Currently, the Technical Advisory Team, Wetland Advisory Group, and Project Reviewers are implementing these activities through the coordination of a contracted project facilitator.⁶¹

⁵⁴ Robb, *supra* note 17.

⁵⁵ See *Indiana Wetlands, Teachers and Educators* at <http://www.in.gov/wetlands/teachers/index.html> (last visited July 5, 2007).

⁵⁶ Personal communication with John Bacone, Ind. Dep't of Natural Res., Division of Nature Preserves (Mar. 15, 2007).

⁵⁷ Renshaw, *supra* note 16.

⁵⁸ Robb, *supra* note 17.

⁵⁹ Indiana Department of Natural Resources, *supra* note 1.

⁶⁰ *Id.*

⁶¹ *Id.*

VIII. Acronyms and Abbreviations

CWA – Clean Water Act

EPA – U.S. Environmental Protection Agency

FCA – Flood Control Act

FWS – U.S. Fish and Wildlife Service

IAC – Indiana Annotated Code

IDEM – Indiana Department of Environmental Management

IDNR – Indiana Department of Natural Resources

LPA – Lake Preservation Act

NRCS – Natural Resource Conservation Service

NWP – Nationwide Permit

RGP – Regional General Permit

WRP – Wetland Reserve Program